

SOV/10-59-3-6/32

Trends in the Development of Large Economic-Geographic Areas

bases (especially that of the machine building and chemical industries) is increasing. 3) Some new economic-organizational factors support this trend toward extending the dimensions of the main areas (e.g. establishment of the National-Economy Councils - Sovnarkhozes - on every economic administrative district). 4) The many-sided development of the areas is assured only if the opposite trend to multiply in size, not in number is adopted. The author also rejects the other extreme; subdividing the USSR into a still smaller number of large areas because this view neglects the idea of specialization of the areas. The author mentions the following Soviet scientists: N.N. Kolosovskiy, A.G. Omarovskiy, M.B. Mazanova, a scientific collaborator of NIEI USSR Gosplan, and Ye.D. Khanukov. There are 5 Soviet references.

ASSOCIATION: Nauchno-issledovatel'skiy ekonomicheskii institut Gosplana SSSR (Scientific-Research Economic Institute of the Gosplan USSR).

Card 2/2

ALAMPIYEV, Peter M.

"Actual System of Economic Regions in the USSR"

report to be submitted for the Intl. Geographical Union, 10th General Assembly
and 19th Intl. Geographical Congress, Stockholm, Sweden, 6-13 August 1960.

ALAMPIYEV, P.M.; VITYAZEVA, V.A.; LISTENGURT, F.M.; MAKSAKOVSKIY, V.P.;
POKSHISHEVSKIY, V.V., prof.; SOLOV'YEVA, M.G., dotsent;
LYALIKOV, N.I., dotsent, red.; ZAK, A.L., tekhn.red.

[Economic geography; toponymy. Collected articles] Ekonomicheskaya
geografiya: Toponimika; sbornik statei. Moskva, 1960. 169 p.
(MIRA 14:2)

1. Moscow. Moskovskiy gosudarstvennyy pedagogicheskiy institut.
Geografo-biologicheskiy fakul'tet.
(Geography, Economic)
(Europe, Eastern--Names, Geographical)

ALAMPIYEV, P.M., red.; OZNOBIN, N.M., red.; OMAROVSKIY, A.G., red.;
KOMAROV, Ye.I., red.; PONOMAREVA, A.A., tekhn.red.

[Problems of production distribution and economic regionalization]
Voprosy razmeshcheniya proizvodstva i ekonomicheskogo raionirova-
niya; sbornik statei. Pod red. P.M.Alampieva, N.M.Oznobina i A.G.
Omarovskogo. Moskva, Gosplanizdat, 1960. 307 p.

(MIRA 13:11)

1. Moscow. Nauchno-issledovatel'skiy ekonomicheskii institut.
(Russia--Industries) (Economic zoning)

ALAMPIYEV, P.M.

Lenin's ideas of socialist economic districts and their realization. Izv.AN SSSR.Ser.geog. no.4:35-43 J1-Ag '60 .
(MIRA 13:7)

1. Nauchno-issledovatel'skiy ekonomicheskii institut
Gosekonomsoвета СССР.

(Lenin, Vladimir Il'ich, 1870-1924)
(Economic zoning)

ALAMPIYEV, Petr Martynovich, doktor ekonom. nauk; MYAKUSHKOV, V.A., red.;
KONOVALYUK, I.K., mladshiy red.; KISELEVA, Z.A., red. kart; BURLA-
KA, N.P., tekhn. red.

[Economic regions of our country] Ekonomicheskie raiony nashei strany.
Moskva, Gos. izd-vo geogr. lit-ry, 1961. 95 p. (MIRA 14:11)
(Economic zoning)

ALAMPIYEV, P.M.

"Regional planning"; problems in planning industrial regions by
D.I. Bogorad. Reviewed by P.M. Alampiev. Izv. AN SSSR. Ser. geog.
no. 4:150-151 J1-Ag '61. (MIRA 14:7)
(Regional planning)
(Bogorad, D. I.)

ALAMPIYEV, P.M.

New features in the distribution of production during the period of large-scale building of communism. Izv. AN SSSR. Ser. geog. no.5:18-27 ~~SS~~ '61. (MIRA 14:9)

1. Sovet po izucheniyu proizvoditel'nykh sil pri Gosekonomsomite SSSR.

(Industries, Location of)

ALAMPIYEV, P.M., doktor ekonom. nauk, prof., red.; FEYGIN, Ya.G.,
doktor ekonom. nauk, prof., red.; LISETSKAYA, A.P., red.;
PONOMAREVA, A.A., tekhn. red.

[Methodology of economic geography] Metodologicheskie voprosy
ekonomicheskoi geografii. Moskva, Ekonomizdat, 1962. 278 p.
(MIRA 15:6)

1. Chlen-korrespondent Akademii nauk USSR (for Feygin).
(Geography, Economic--Study and teaching)

ALAMPIYEV, P.M.; KISTANOV, V.V.; MAZANOVA, M.B.; CHUMICHEV, D.A.

Dividing the Mongolian People's Republic into main economic zones. Izv. AN SSSR. Ser. geog no.1:24-36 Ja-F '62.

(MIRA 15:2)

1. Institut ekonomiki mirovoy sotsialisticheskoy sistemy AN SSSR,
Sovet po izucheniyu proizvoditel'nykh sil Gosekonomsoвета SSSR
i Institut geografii AN SSSR.

(Mongolia--Economic zoning)

ALAMPIYEV, P.M.

Important economic regions of the U.S.S.R. according to the new
regionalization and problems of their development. Izv. AN SSSR.
Ser. geog no.1:57-71 Ja-F '62. (MIRA 15:2)
(Economic zoning)
(Economic development)

ALAMPIYEV, P.M.

Large economic regions of the U.S.S.R. according to the new
regionalization and problems in developing them. Izv. AN
SSSR. Ser. geog. no.2:42-57 Mr-Apr '62. (MIRA 15:3)
(Economic zoning) (Russia--Industries)

ALAMPIYEV, P.M.; OMAROVSKIY, A.G.

"Distribution of socialist industry; theoretical studies" by A.E.Probst.
Reviewed by P.M.Alampiev, A.G.Omarovskii. Izv. AN SSSR. Ser. geog.
no.4:112-115 J1-Ag '62. (MIRA 16:5)
(Industries, Location of) (Probst, A.E.)

ALAMPIYEV, P. M.

"Regional planning as means of economic upheaval"

report to be submitted for the United Nations Conference on the
Application of Science and Technology for the Benefit of the Less
Developed Areas - Geneva, Switzerland, 4-20 Feb 63.

ALAMPIEV, P.M. [Alam'yev, P.M.]

Large economic regions of the U.S.S.R. after the new division into districts, and problems of their developments. Analele geol geogr 14 no.4:115-131 O-D '62.

ALAMPIYEV, Petr Martynovich, prof.; LISOV, V.Ye., red.; TARASOVA,
T.K., mladshiy red.; PONOMAREVA, A.A., tekhn. red.

[Economic zoning of the U.S.S.R.] Ekonomicheskoe raioni-
rovanie SSSR. Moskva, Ekonomizdat, Book 2. 1963. 247 p.
(MIRA 16:5)

(Economic zoning)

ALAMPIYEV, P.M.

Decisions of the November Plenum of the Central Committee of the CPSU and problems of the economic regionalization of the U.S.S.R.
Izv. AN SSSR. Ser. geog. no. 2:46-54 Mr-Apr '63. (MIRA 16:4)

1. Institut ekonomiki mirovoy sotsialisticheskoy sistemy AN SSSR.
(Economic zoning)

ALAMPIYEV, P. M., doktor ekonom. nauk

Hungarian Geographical Conference. Vest. AN SSSR 33 no.1:85-86
Ja '63. (MIRA 16:1)

(Geography—Congresses)

ALAMPIEV, P.M. [Alampiyev, P.M.]

Some new features of the territorial repartition of production in the period of the all-out construction of communism. Analele geol geogr 16 no.3:96-106 JI-Ag '62.

ALAMPIYEV, P.M.; ZHIRMUNSKIY, M.M.; KLUPY, V.S.; KONSTANTINOV, O.A.;
MILEIKOVSKIY, A.G.; SEMEVSKIY, B.N.; FEYGIN, Ya.G.; SHISHKIN,
N.I.; YANITSKIY, N.F.

Letter to the editors of the journal "Izvestia AN SSSR, Seriya
Geograficheskaya." Izv. AN SSSR. Ser.geog. no.6:146-147 N-D '62.
(MIRA 15:12)
(Geography, Economic)

ALAMPIYEV, Petr M. Professor

"Practical Application of the Work on Economic Regionalization in the USSR".

Report presented at the IGU Commission on Methods of Economic Regionalization,
Jablonna, Poland, 9-14 September 1963.

ALAMPIYEV, P.M.

Problems of the economic zoning and distribution of production
at the Hungarian geographical conference. Izv. AN SSSR. Ser.geog.
no.1:119-124 Ja-F '63. (MIRA 16:2)

1. Institut ekonomiki mirovoy sotsialisticheskoy sistemy AN SSSR.
(Hungary—Economic zoning) (Hungary—Industries, Location of)

ALAMPIYEV, P.M.; OMAROVSKIY, A.G.; UDOVENKO, V.G.,

New features of the literature on the economic regions of the
U.S.S.R. Izv. AN SSSR. Ser. geog. no.4:147-151 J1-Ag '63.

(MIRA 16:8)

(Bibliography--Geography, Economic)

ALAMPIYEV, P.M., doktor ekonom. nauk

Meetings of the Committee on Methods of Economic Regionaliza-
tion. Vest. AN SSSR 33 no.12:80-81 D '63. (MIRA 17:1)

VASIL'TSOV, V.D.; VOLODARSKIY, L.M.; VOLCHENKO, M.Ya.; GALETSKAYA, R.A.; IROV, N.I.; KARINYA, L.F.; KONOVALOV, Ye.A.; MATVIYEVSKAYA, E.D.; PETRESKU, M.I.; RUDAKOV, Ye.V.; SAYFULINA, L.M.; SKVORTSOVA, A.M.; SOKOLOVA, N.M.; SOTNIKOVA, I.A.; STOLPOV, N.D.; SURKO, Yu.V.; TEN, V.A.; TRIGUBENKO, M.Ye.; FIRSOVA, Yu.V.; SHABUNINA, V.I.; YUMIN, M.N.; RYABUSHKIN, T.V., doktor ekon. nauk, otv. red.; ALAMPIYEV, P.M., red.; PAK, G.V., red.; GERASIMOVA, D., tekhn.red.

[Economy of socialist countries, 1960-1962] Ekonomika stran sotsializma, 1960-1962gg. Moskva, Izd-vo "Ekonomika," 1964. 261 p. (MIRA 16:12)

1. Akademiya nauk SSSR. Institut ekonomiki mirovoy sotsialisticheskoy sistemy.

(Communist countries--Economic conditions)

ALAMPIYEV, P.M.

Symposium on the geography of foreign socialist countries. Izv.
AN SSSR. Ser. geog. no.5:24-26 S-0 '64.

(MIRA 17:11)

PROBST, Abram Yefimovich; ALAMPIYEV, P.M., retsenzent; ITIN, L.I.,
retsenzent; SHISHANKOV, V., red.; BESSUDKOVA, N., mlad. red.

[Efficiency of territorial production organization; method-
ological studies] Effektivnost' territorial'noi organizatsii
proizvodstva metodologicheskie ocherki. Moskva, Mysl',
1965. 206 p. (MIRA 18:4)

EREYTERMAN, Aleksandr Davydovich; ALAMPIYEV, P.M., prof.,
retsenzent; KHRUSHCHEV, A.T., dots., retsenzent;
SEVERTSEV, V.A., red.

[Economic geography of the U.S.S.R.] Ekonomicheskaya
geografiya SSSR. Moskva, Vysshaya shkola. Pt.1. 1965.
369 p. (MIRA 18:8)

ALAMPYEV V. F.

SCV/6-22-7-4/25

Sokolova, O. I.

5(2), 5(4)
AUTHOR:

Results of the Competition for the Best Improving
Suggestion (Itogi kontura na uchastnye razrabotki i izobreteniya)

TITLE:

PERIODICAL: Geodesiya i kartografiya, 1959, Nr 7, pp 17-21 (USSR)

ABSTRACT: In May 1959, the ordinary competition for the best improving suggestion in the field of topographic-geodesic and cartographic production was concluded at the Glavnoye upravleniye geodesii i kartografii MVD SSSR (Main Administration of Geodesy and Cartography of the Ministry of Internal Affairs of the USSR). 7 aerogeodesic services, 6 cartographic institutes and MECH took part. A total of 30 topographic-geodesic and cartographic suggestions were submitted. The 1st prize (1000 rubles) was awarded to V. A. Muraviev and V. V. Drusov (Minsk) for the "Formless Fastening of Atlas Blocks". The 2nd prize of 750 rubles was awarded to: 1) Ya. A. Bratslavskiy, V. M. Varugin, Yu. M. Galitskiy, O. F. Sheller and V. P. Stepanov (Minsk) for "Technology of the Use of Standard Bases (Lipovaya Osmeta)". 2) I. V. Gurevich, Y. M. Varugin, E. O. Mavrilitskaya, O. D. Shalikh, L. A. Zaslavskaya for "Technology of the Manufacture of Combined Diapositives" (MECH). 3) D. A. Larin (Koskovskoye AGP (Moscow AGP)) for "Reduction of Work in Evaluating the Accuracy of Dynamic Geodesic Nets Formed by Figures of Angular Shape". 4) N. V. Golitskiy (Koskovskoye AGP (Moscow AGP)) for "Light and Darkening of Maps by the Method of the Use of Special Points by the Method of Tracing by Means of Vapor". 5) I. D. Ol'shanskii (Koskovskoye AGP (Tatarsk AGP)) for "Construction of an Overhead Trolley for Timber Transport". 6) I. A. Evtin (Koskovskoye AGP (Moscow AGP)) for "Variation in the Attachment of Photographs on the 57-2". 7) V. P. Zarubin (Koskovskoye AGP (Moscow AGP)) for "Raising of Geodesic Signs by 5-7 Meters". 8) D. I. Salimov, I. V. Gurevich, S. I. Aleksandrov, I. M. Kuchuk, I. K. Kuchuk and V. M. Kuchuk (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 9) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 10) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 11) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 12) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 13) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 14) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 15) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 16) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 17) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 18) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 19) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 20) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 21) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 22) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 23) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 24) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 25) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 26) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 27) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 28) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 29) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method". 30) M. P. Gubareva (Koskovskoye AGP (Moscow AGP)) for "The Use of Topographic Maps by the Photocopying Method".

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Card 2/6

Card 3/6

ALAN, M., aspirantka

Preparations against mealy bugs. Zashch. rast. ot vred. i bol.
10 no.7:21-22 '65. (MIRA 18:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zashchity
rasteniy.

ALAN, P.B., aspirant

Test of arboricides in Abkhazia. Zashch. rast. ot vred. i bol.
9 no.12:17-19 '64. (MIRA 13:4)

1. Vsesoyuznyy institut zashchity rasteniy.

ALAN, P. B., agronom po sashchite rasteniy

Testing herbicides against Baccharis. Zashch. rast. ot vred.
i bol. 5 no.10:25-26 0 '60. (MIRA 16:1)

1. Sovkhoz "Dioskuriya".

(Oghamchire District—Baccharis)
(Clearing of land)

AVETISYAN, D.O.; PLUZYAN, E.B.; ALANAKYAN, G.A.

Using the method of radical hodograph in investigating frequency characteristics of linear dynamic systems. Izv.AN Arm.SSR.Ser.tekh. nauk 18 no.5:3-6 '65. (MIRA 18:12)

1. Submitted February 4, 1965.

L #4087-66 EWT(1)/EPF(n)-2/ENG(m)/EPA(w)-2 LJP(c) AT

ACCESSION NR: AP5024029

UR/0057/65/035/009/1552/1557
533.9

AUTHOR: Alapnayan, Yu. R. 44, 45

TITLE: Frequency doubling on reflection of a wave at a plasma boundary 21, 44, 45

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 9, 1965, 1552-1557

TOPIC TAGS: plasma electromagnetic wave, plasma wave, plasma wave reflection, electromagnetic wave reflection, nonlinear effect, fluid surface

ABSTRACT: The author discusses reflection of electromagnetic waves at the plane boundary of a semi-infinite plasma with lowest order nonlinear effects taken into account. Conditions of low space dispersion (electron thermal velocity small compared with wave phase velocity) are assumed. The calculations are based on the kinetic equation for the electron distribution with self-consistent field but no collision term. The distribution function is expanded in powers of the electric field strength, and from the second order term there are derived the volume and surface currents excited by the simultaneous presence of two electromagnetic waves. These currents are employed to calculate the amplitudes and directions of the second harmonic waves that are produced in the reflection of a plane electromagnetic wave obliquely incident on the surface from within the plasma or from free

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ACCESSION NR: AP5024029

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space. The excitation and behavior of surface waves are also discussed. Langmuir waves are produced when the second harmonic frequency is close to the Langmuir frequency; this case is discussed separately. A surface wave whose frequency is close to half the Langmuir frequency gradually transforms into a Langmuir wave and disappears into the depths of the plasma; the rate at which this occurs is calculated. "In conclusion, the author expresses his gratitude to V.P.Silin for his guidance of the work." Orig. art. has: 35 formulas. ^{44,55} [15]

ASSOCIATION: Fizicheskiy institut im. P.N.Lobedova, Moscow (Physics Institute)

44,55

SUBMITTED: 04Jan65

ENCL: 00

SUB CODE: ME

NO REF SOV: 002

OTHER: 001

ATD PRESS: 4/27

BVK
Card 2/2.

L 23101-66 EWT(1)/ETC(f)/EPF(n)-2/ENG(m) LJP(c) AT

ACC NR: AP6007073

UR/0057/66/036/002/0258/0265

AUTHOR: Alanakyan, Yu.R.

ORG: Physics Institute im. P.N. Lebedev, Moscow (Fizicheskiy institut)

TITLE: On the interaction of plane and surface electromagnetic waves in a plasma

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 2, 1966, 258-265

TOPIC TAGS: plasma electromagnetic wave, plasma surface wave, nonlinear theory, kinetic equation, perturbation method,

ABSTRACT: The author discusses the interaction of surface waves on the sharp plane boundary of an isotropic plasma with electromagnetic waves incident on the plasma from outside. It is assumed that the frequencies of all the waves considered (including the combination frequencies) are far from the Langmuir frequency and that the electron velocities are small compared with the phase velocity of the waves. Collisions and ion motions are neglected. The Lorentz force and the term $\mathbf{v} \cdot \text{grad}(\mathbf{f})$ in the kinetic equation for the electron distribution function f are regarded as small and treated as perturbations. The calculations are based on the first order perturbed distribution function. In this approximation there are calculated the logarithmic increments of the surface waves and of plane waves in the plasma and in the vacuum under the conditions that there are initially present a surface wave

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UDC: 533.9

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ACC NR: AP6007073

and an incident plane wave of arbitrary incidence angle and polarization and that resonance does not obtain between any of the frequencies concerned and the surface oscillations of the plasma. It is found that the interaction between an incident plane wave and a surface wave can lead either to an exponential growth or an exponential decay of the latter. The author thanks V.P. Silin for guiding the work. Orig. art. has: 34 formulas.

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SUBM DATE: 15Jun65

ORIG. REF: 006 OTH REF: 001

Card

2/2

I 33414-66 EWT(1)/ETC(f) IJP(c) GG/AT
ACC NR: AP6015301 (A, N)

SOURCE CODE: UR/0057/66/036/005/0806/0812

AUTHOR: Alanakyan, Yu.R.

ORG: Physics Institute im. P.N.Lekadev, Moscow (Fizicheskiy Institut)

TITLE: On the interaction of electromagnetic waves at the boundary of a plasma

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 5, 1966, 806-812

TOPIC TAGS: plasma electromagnetic wave, nonlinear effect, nonlinear vibration, surface wave

ABSTRACT: The author employs equations derived in an earlier paper (Yu.R.Alanakyan, ZhTF, 36, No.2, 1966) describing the nonlinear interaction between surface waves on a plasma-vacuum boundary to discuss the interaction of two surface waves with a plane wave propagating in the vacuum or in the plasma. The interaction of two surface waves of different frequencies is first considered. It is shown that under certain conditions the components of the field that vary at the combination frequencies (the sum and difference frequencies and the two second harmonic frequencies) represent forced surface waves. Under other conditions the combination frequency components propagate as plane waves either in the vacuum alone or in both the vacuum and the plasma. When a plane wave is incident from outside onto a plasma-vacuum boundary carrying two sur-

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face waves, there arise periodic time variations of the amplitudes of the surface waves. Expressions are derived for the frequency and amplitude of these beats. The author thanks V.P.Silin for guiding the work. Orig. art. has: 32 formulas.

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SUBM DATE: 19Jul65/

ORIG REF: 003/

OTH REF: 001

Card 2/2 ULR

L 45983-66 EWT(1) IJP(c) AT

ACC NR: AP6028631

SOURCE CODE: UR/0057/66/036/008/1519/1521

AUTHOR: Alanakyan, Yu.R.51
50
B

ORG: none

TITLE: On the possible production of surface waves in the interaction of plane waves with a plasma ?

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 8, 1966, 1519-1521

TOPIC TAGS: plasma electromagnetic wave, ~~surface property~~, surface wave, mathematic physics, electromagnetic wave phenomenon, electron plasma, nonlinear effect

ABSTRACT: The author discusses the interaction of two plane electromagnetic waves of different frequency incident from a vacuum onto the infinite plane boundary of a plasma. The thermal velocities of the plasma electrons are assumed to be much lower than the phase velocity of the waves. An equation for the field within the plasma of waves with frequency equal to the difference between the frequencies of the two incident waves, said to be derived from Maxwell's equations and the "material equation", is quoted from an earlier paper of the author (ZhTF, 35, 1552, 1965), and approximate solutions of that equation for E-waves and H-waves are obtained with the aid of further results from the cited paper. The amplitude of the E-wave field within the plasma is independent of time, as is also that of the H-wave field unless the difference frequency is equal to the frequency of a proper surface wave. In the latter case the

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ACC NR: AP6028631

amplitude of the proper surface wave of the difference frequency increases linearly with time. The results are valid in the limit of low incident wave amplitude. The author thanks V.P.Silin for his guidance of the work. Orig. art. has: 14 formulas.

SUB CODE: 20 SUBM DATE: 15Jan66 ORIG. REF: 002 OTH REF: 001

Card 2/2

ALANDARENKO, E.N.; VAYNSHTEYN, M.S.

Results of treating peptic ulcer patients with vicalin according
to materials of the Vasil'kov District Hospital. Vrach. delo
no.3:123 Mr '64. (MIRA 17:4)

1. Vasil'kovskaya rayonnaya bol'nitsa Kiyevskoy oblasti.

ALANDAROV, N. S. (Col. of the Med. Serv.)

"The Role of the Aviation Surgeon in Prevention of Flight Accidents" Voenno-meditsinskiy zhurnal, No. 8, 1955, pp. 16-19.

Translation D498884

ALANDAROV, N. S.

"At the Aeromedical Section of the Learned Medical Council Attached to the Chief of the Main Military Medical Administration, Ministry of Defense," *Voyenno-medits.zhur.*, No.11, p. 95, 1955

Translation D406257

ALANDAROV, V.N.

Analysis of mortality in adenoma of the prostatic gland.
Urologiia 29 no.1:25-29 '64. (MIRA 17:8)

1. Urologicheskoye otdeleniye (zav. - kand. med. nauk V.I.
Vorobtsov) Tsentral'noy klinicheskoy bol'nitsy imeni N.I.
Semashko Ministerstva puty soobshcheniya, Moskva.

ALANAS' YEV, A.S.;- LYSENKO, G.I.

Effect of urotropine on steel corrosion in sulfuric acid
Izv. vys. ucheb. zav; khim. i khim. tekhn. 3 no. 5:942-
946 '60. (MIRA 13:12)

1. Dnepropetrovskiy metallurgicheskiy institut. Kafedra
fizicheskoy khimii.

(Hexamethylenetetramine) (Steel--Corrosion)
(Sulfuric acid)

1. ALANIYA, I. F.
2. USSR (600)
4. Stars, Variable
7. CQ Lacertae.
Per. zvezdy 8 No. 3, 1951

9. Monthly Lists of Russian Accessions, Library of Congress, March 1953, Unclassified.

ALANIYA, I.F.

Individual moments of maxima of short-period Cepheids. Astron. tsir. no.
146:14 F '54. (MLRA 7:6)

1. Abastumanskaya astrofizicheskaya observatoriya. (Stars, Variable)

ALANIYA, I.F.

Individual maximum moments of 40 RR Lyrae stars. Astron.tsirk.
no.173:20-21 0 '56. (MIRA 10:1)

1. Abastumanskaya astrofizicheskaya observatoriya, gora Kanobili.
(Stars, Variable)

ALANIYA, I. F., Cand Phys-Math Sci -- (diss) "Investigation of
the Selective Absorption of Light in Galactics on the Basis
of the Catalog of Color Plethorae of Stars of the Type RR
Lyra." Tbilisi, Publication of Acad Sci ^{Georgian} ~~USSR~~ SSR, 1957.
9 pp (Min of Higher Education USSR, Yerevan State University),
100 copies (KL, 51-57, 91)

- 1 -

ALANIYA, I.F.

Investigation of the selective absorption of light in the Milky Way based on light emitted by short-period Cepheids. Soob. AN Gruz.SSR 18 no.2:159-166 F '57. (MIRA 10:7)

1. Akademiya nauk Gruzinskoy SSR, Abastumanskaya astrofizicheskaya observatoriya. Predstavleno akademikom Ye.K. Kharadze.
(Milky Way) (Stars, Variable--Spectra)

AUTHOR: Alaniya, I. F. 503

TITLE: The colour excesses of 102 RR Lyrae stars. (Izbytki tsveta 102 zvezd tipa RR Liry).

PERIODICAL: "Astronomicheskii Zhurnal" (Journal of Astronomy), 1957, Vol. 34, No. 2, pp. 206 - 216 (USSR).

ABSTRACT: The method used for deriving the colour indices of RR Lyrae stars at maximum brightness is described briefly. The problem of normal colours is discussed. At present there are no reliable criteria by which the stars can be classified as belonging to one group or another. Therefore the mean colour index of stars, with a galactic latitude greater than 60° , taking into account the optical thickness of selective absorbing matter, is defined as the normal colour. Observations show that 80% of these stars, according to their colour characteristics, form a uniform group. The absence of a dependence between the period and colour index is discussed. The mean absolute magnitude of 47 stars is $+0.2 \pm 0.2$. $M_{pg} = +0.3 \pm 0.1$ was taken as the final value. A catalogue of colour excesses and other data is given. The results of a general character of an investigation of space reddening of light are given. The parameters of Parenago's formula for absorption have been determined in three galactic zones: $0.-30^\circ$, $30-60^\circ$, $60-90^\circ$. 2 tables, 1 figure, 18 references, 11 of which are Russian. Abastuman Astrophysical Observatory. Recd. Nov. 9, 1956.

ALANIYA, I.F.

Investigating the selective light absorption in the Galaxy basing
on color excesses of short period Cepheids. Biul.Abast.astrofiz.obser.
no.23:3-67 '58. (MIRA 11:11)

(Absorption of light) (Milky Way) (Cepheids)

ALANIYA, I.F.

Spectra of RR Lyrae-type stars. Astron.tsir. no.205:17 0 '59.
(MIRA 13:6)

1. Abastumanskaya astrofizicheskaya observatoriya.
(Cepheids)

ALANIYA, I.F.

Spectrophotometric study of the short-period cepheid RZ Cephei.
Biul. Abast. astrofiz. obser. no.28:87-103 '62. (MIRA 16:7)
(Spectrophotometry) (Stars, Variable)

ALANIYA, I.F.

Photometry of the continuous spectrum of AC Herculis. Biul. Abast.
astrofiz. obser. no.28:105-112 '62. (MIRA 16:7)
(Stars--Spectra)

DOLIDZE, M.V.; ALANIYA, I.F.

Photometry of the continuous spectra of RS and XX Ophiuchi. Biul.
Abast. astrofiz. obser. no.28:113-119 '62. (MIRA 16:7)
(Stars—Spectra)

ALANID, I.N.

Spectral study of the variable star DX Del. Biul. Abast. astrofiz.
obs. 32:31-39 '65. (MIRA 18:10)

ALANIA, I.F.; POPOV, M.V.

Nova Herculis 1963. Biul. Abast. astrofiz. obser. 32:41-51 '65.
(MIRA 18:10)

SOMOVA, A.G.; GERASYUK, L.G.; AFANAS'YEVA, M.K.; SILAKOVA, Ye.Ya.;
AZAROVA, A.G.; ALANIYA, I.I.; KOSAREVA, A.V.; SOLOV'EVA, A.V.;
KRASNOVA, N.V.

Problem of endemic rat typhus on the Black Sea coast. Zhur.
mikrobiol.epid.i immun. 31 no.2:51-56 F '60. (MIRA 13:6)

1. Iz Rostovskogo-na-Donu nauchno-issledovatel'skogo instituta
Ministerstva zdravookhraneniya SSSR i portovykh protivochumnykh
laboratoriy v Odesse, Batumi i Novorossiyske.
(TYPHUS MURINE epidemiol.)
(TYPHUS veterinary)
(RATS diseases)

ROSTIGAYEV, B.A.; ALANIYA, I.I.

A new species of fleas from Adzharia. Med. paraz. i paraz. bol.
32 no.6:722-724 N-D '63 (MIRA 18:1)

1. Iz parazitologicheskogo otdela (zav. V. Ye. Tiflov) Nauchno-
issledovatel'skogo protivochumnogo instituta Kavkaza i Zakav-
kaz'ya v Stavropole (direktor V.N. Ter-Vartanov) i Batumskogo
otdeleniya (nachal'nik I.I. Alaniya) Gruzinskoy protivochumnoy
stantsii (nachal'nik - N.M. Abesadze).

M. V. ALANIYA, O. M. BLOKH, Ya. L. BLOKH, A. M. CHETIYA, L. I. DORMAN
N. S. KAMINER, T. V. KEBULADZE, V. K. KOYAVA, Ye. V. KOLOMEYETS, V. O. KORIDZE,
V. O. PIVEREVA, M. I. TYASTO

Cosmic Ray Effects During Magnetic Storms

report submitted for the 8th Intl. Conf. on Cosmic Rays (IUPAP), Jaipur India,
2-14 Dec 1963

L 23405-65

EW(1)/EWG(v)/FCC/EEC-4/EEC(t)/EWA(h) Po-4/Pe-5/Pq-4/Pae-2/Peb/Pl-4

GW/WS

ACCESSION NR: AP5002100

S/0048/64/028/012/1993/1996

AUTHOR: Alaniya, M. V.; Dorman, L. I.; Koiava, V. E.; Kebuladze, T. V.;
Koridze, V. G.; Chkhefiya, A. M.

TITLE: Influence of magnetic storms on cosmic rays during maximum
and minimum solar activity

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 28, no. 21, 1964,
1993-1996 (no. 12)

TOPIC TAGS: cosmic ray, magnetic storm, Forbush effect, solar variation,
cosmic ray intensity

ABSTRACT: The parameters which characterize the association between
the effects of cosmic rays and the phases of magnetic storms are: the
increase of cosmic ray intensity before the magnetic storm, the global
distribution of the Forbush effect, and solar diurnal variations.
Data for studying the correlations between these two phenomena were
taken from observations made during the IGY. Four magnetic storms of
world-wide character were discussed. The intensity of cosmic rays

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L 23405-65

ACCESSION NR: AP5002100

for the soft and hard components is represented graphically in the original article for magnetic storms from 13 to 31 August 1958. The intensity of the cosmic rays increased before the storm, reaching a maximum during the daytime. The amplitude of the intensity increase was greater at higher elevations than at sea level. Discrepancies between experimental and theoretical results were observed both for sea level and mountain elevations. Orig. art. has: 3 figures. [EG]

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: AA

NO REF SOV: 010

OTHER: 002

ATD PRESS: 3174

Card 2/2

ALANIYA, M.V.; DORMAN, L.I.; SHATASHVILI, L.Kh.

Character of the distribution of cosmic ray intensity fluctuations
for successive instants. Geomag. i aer. 5 no.1:161-162 Ja-F '65.
(MIRA 18:4)

1. Institut geofiziki AN GruzSSR.

ALANIYA, M.V.; DORMAN, L.I.; SHATASHVILI, L.Kh.

The 27-day variations in cosmic ray anisotropy on data of observations of the neutron component at mountain stations of the world network.
Izv. AN SSSR.Ser.fiz. 29 no.10:1916-1919 0 '65.

(MIRA 18:10)

1. Institut geofiziki AN GruzSER.

ALANIYA, M.V.; DOLEVA, I.I.; KUMAR, V.G.; KOLAVA, V.E.; SHATASHVILI, L.Kh.

Planetary distribution and possible interpretation of sudden increases in cosmic ray intensity, according to data of the world network of stations, unrelated to the visible solar formations. Izv. AN SSSR.Ser.fiz. 20 no.10:1923-1926 O '65.

(MIRA 18:10)

1. Institut geofiziki AN GruzSSR.

ACC NR: AP7002198

SOURCE CODE: UR/0203/66/006/006/1098/1100

AUTHOR: Alaniya, M. V.; Dorman, L. I.; Shatashvili, L. Kh.

ORG: Institute of Terrestrial Magnetism, Ionosphere, and Propagation of Radio Waves, AN SSSR (Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR); Institute of Geophysics, AN GruzSSR (Institut geofiziki AN GruzSSR)

TITLE: Quasi-spiral changes of 27-day variation of cosmic rays with the solar activity

SOURCE: Geomagnetizm i aeronomiya, v. 6, no. 6, 1966, 1098-1100

TOPIC TAGS: cosmic ray, magnetic field, interplanetary space, harmonic analysis, neutron component, solar activity, *cosmic ray intensity*

ABSTRACT: It is pointed out that the eleven year variations of cosmic rays are usually determined from the mean monthly intensities of cosmic rays. However, the fine structure and the longitudinal distribution of cosmic rays cannot be determined from these data. Using the 27 day variation of cosmic ray intensities, the asymmetry of the magnetic inhomogeneities on the solar surface and their duration in the interplanetary space can be detected. The amplitude of the phase of the 27 day period of variations in the intensity of cosmic rays was determined by harmonic analysis from the mean values of the intensity of the neutron component. The obtained results are presented graphically. The graphs show that the amplitude of 27-day variation diminishes nonmonotonically with the solar activity, completing a full cycle (12 to

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UDC: 523.165

ACC NR: AP7002198

18 solar rotations) at the minimum of solar activity. Thus, the 27 day variations of cosmic rays exhibit a spiral-shaped run. The spiral twists during the minimum of solar activity and untwists at its maximum. Variations of cosmic rays are caused by asymmetric fluxes of magnetic inhomogeneities. The asymmetry decreases with a decrease in solar activity. Orig. art. has: 2 figures. [EG]

SUB CODE: 04/ SUBM DATE: 08Dec65/ ORIG REF: 004/

Card 2/2

SZANTAY, Janos; K. ALANIA, Valeria; URAY, Zoltan

Experiences with radiochromatographic analysis of metabolic products of S³⁵-labeled methionine. Kiserl. orvostud. 15 no.6: 658-653 D '63.

1. Cluj-kolozsvari Nuklearis Orvosgyogyaszati Osztaly.
(URINE) (SULFUR ISOTOPES) (CHROMATOGRAPHY)
(METHIONINE) (CYSTINE) (AMINO ACIDS)

ALANIYA, V.P.

6.9

Simultaneous nitration and chlorination of methane
A. V. Topchiev, and V. P. Alaniya. *Doklady Akad. Nauk S.S.S.R.* 67, 297 (1949). Treatment of CH_4 with NO_2 (4:1 ratio) and Cl_2 (1:3) at temps. from room temp. to 300° in a flow system in a glass tube showed that the individual gases do not react under these conditions and only the combined action at elevated temps. leads to reaction; at temps. above 150° chlorination, nitration, and oxidation take place, the latter increasing with higher temps. (MeOH , HCOOH , and CH_2O form). Fractionation of the products gave MeNO_2 , b. 100° (identified by nitro-styrene formation, m. $80-7^\circ$), CH_3NO_2 , b. 45.7° , m. 24.5° , n_D^{20} 1.4324, d_4^{20} 1.0180, and $\text{C}_2\text{H}_5\text{NO}_2$, b. 122.3° , n_D^{20} 1.4324; other unidentified products and tar were also obtained. No yields are given. G. M. Kosolapoff

ALANIYA, V. P.

USSR/Scientists - Commemorative biography

Card 1/1 Pub. 86 - 2/37

Authors : Topchiev, A. V., Academician; and Alaniya, V. P.

Title : A Russian outstanding in organic chemistry

Periodical : Priroda 43/10, 9-15, Oct 1954

Abstract : An account is given of the life and work of Vladimir Vasil'evich Markovnikov in commemoration of the 50th anniversary since his death. His studies in the interaction of atoms and the principles involved in the formation of isomers are noted along with his other scientific work and writings. Illustration.

Institution : ...

Submitted : ...

5(3)

AUTHORS: Topchiyev, A. V., Academician,
Alaniya, V. P., Pollavtseva, I. I.

SOV/20-125-1-27/67

TITLE: Nitration of Isopentane in the Presence of Carbon Tetrachloride
(Nitrovaniye izopentana v prisutstii chetyrekhkhloristogo
ugleroda)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 1, pp 104-105
(USSR)

ABSTRACT: The authors aimed at the investigation of the effect of chlorine on the reaction mentioned in the title which may form in the reaction zone in the presence of carbon tetrachloride. First, the reaction of isopentane with the nitric acid used for nitration (1.5 : 1) was investigated in a quartz reactor (Fig 1). From among the fractions isolated by distillation the fraction boiling at more than 95° was subjected to further fractionation under a 50 mm vacuum in a rectification column. Analysis has shown that the mixture obtained contained considerable amounts of nitro-methane, nitro-ethane, nitro-propanes, nitro-butanee, and nitro-pentenes, mainly secondary and tertiary (Figs 2, 3). As may be seen from figure 2, the highest yield of nitro-paraffins (48.5%) forms at 300°. The yield of the fractions

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Nitration of Isopentane in the Presence of
Carbon Tetrachloride

SOV/20-125-1-27/67

30-45° = 21%. From table 3 it may be seen that the yield of the fractions of nitro-methane, nitro-propanes, and nitro-butanones decrease in the range 175-325° after having passed through an indistinctly marked maximum at 300°. An optimum yield of nitro-pentanes (17% of the reacted isopentane) is obtained at 300°. The nitro-ethane yield decreases from 3.1 to 0.3% at a temperature increase from 175 to 325°. At the optimum temperature determined (300°) CCl₄ was added. 2% of CCl₄ have no effect on the yield of nitro-paraffin. Only 10% CCl₄ computed with respect to isopentane increase the yield from 48 to 60%. At the same time the yield in nitro-paraffins with a lower molecular weight than that of the initial hydrocarbon increases. Apparently CCl₄ causes the decomposition of hydrocarbon. There are 3 figures and 3 references, 1 of which is Soviet.

SUBMITTED: December 20, 1958

Card 2/2

5(3,4) SOV/20-125-4-39/74
AUTHORS: Topchiyev, A. V., Academician, Alaniya, V. P., Chernyy, G. I.

TITLE: On the Problem of the Interaction of Olefins With Ammonia in the Presence of Oxide Catalysts (K voprosu o vzaimodeystvii olefinov i ammiaka v prisutstvii oksidnykh katalizatorov)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 4, pp 829-830 (USSR)

ABSTRACT: The synthesis of olefin- and partly also of methane hydrocarbons in the course of which nitriles results is a new procedure. It is based upon the reaction of the unsaturated hydrocarbons with ammonia, proceeding at 470-500° in the presence of oxide catalysts: $RCH = CH_2 + NH_3 \rightarrow CH_3CN + RH + H_2$.

A survey on publications is given (Refs 1-3). In the work under review the authors investigated the interaction between isobutylene and ammonia (molar ratio from 1 : 2 to 1 : 5) by means of the German industrial catalyst Nr 1360, in which connection to begin with HCl was introduced into the reaction zone. The reaction proceeded in the vapor phase at 290-500°.

The liquid products obtained were distilled in 3 fractions:
Card 1/2 1) 44-90°, 2) 90-98° and 3) above 98°. In the case of ex-

SOV/20-125-4-39/74

On the Problem of the Interaction of Olefins With Ammonia in the Presence of Oxide Catalysts

periments carried out without HCl the results did fully agree with the publication data. The formation of nitriles begins at above 400° and arrives at its maximum at 480-485°. Above 500° the formation of acetonitriles decreases. The best ratio between ammonia and hydrocarbon is 5 : 1. Table 1 shows several interesting experiments carried out in the presence of HCl. HCl increases the yield in acetonitrile. Apart from the latter also propionitrile and higher nitriles form. There is 1 table.

SUBMITTED: December 19, 1958

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5(3)

AUTHORS:

Topchiyev, A. V., Academician,
Alaniya, V. P., Mazel', I. S.

SOV/20-125-5-26/61

TITLE:

Polymerization of β -Nitrostyrene (Polimerizatsiya
 β -nitrostirola)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 5,
pp 1048-1050 (USSR)

ABSTRACT:

The investigation of the reaction mentioned in the title is interesting in connection with the problems with which research workers are faced in search of new monomers and methods of their polymerization. The reaction mentioned is interesting as well from a theoretical point of view since β -nitrostyrene belongs, according to its structure, to the compounds which are not easily polymerized and yields only dimers. This may explain the fact that no papers on this topic have hitherto been published (except Ref 1). After the polymerization has taken place the authors added chloroform to the reaction product in which a part of the product dissolved, the residue remaining as a precipitate. The latter was dried and treated with ethanol in which it dissolved partly. From the analysis

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Polymerization of β -Nitrostyrene

SOV/20-125-5-26/61

of the chloroform- and ethanol extracts it followed that β -nitrostyrene, which did not enter reaction, was extracted by chloroform, whereas the alcohol absorbed a trimer of this styrene. The precipitate - a white amorphous powder - , which dissolved neither in chloroform nor in ethanol, was the polymer of β -nitrostyrene. In this reaction the influence of several catalysts was tested. Sodium malonic ester was effective, sodium methylate, however, was the most effective catalyst. The yield of polymers was investigated in dependence of temperature, the quantity of the catalyst, and the duration (Figs a, b, c). -10^0 was the optimum temperature (yield 98 %), the optimum catalyst quantity amounted to 4.7 % with respect to the monomer duration 10 - 12 hours. Up to 6 % trimers were produced besides the polymer. In conclusion, the solubility of the polymer, its melting point, and the thermomechanical curve (Fig 2) were discussed. The radiograph (Fig 4) shows that the structure of the polymer is similar to that of polystyrene. There are 3 figures and 2 references, 1 of which is Soviet.

SUBMITTED:
Card 2/2

December 19, 1958

80092

S/020/60/131/06/36/071
B011/B0055.3831
5.3610

AUTHORS: Topchiyev, A. V., Academician, Alaniya, V. P., Makarova, Z. A.
TITLE: Synthesis of 1-Nitropropylene and Test of Its Capability of
Polymerizing

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 131, No. 6, pp. 1359 - 1361

TEXT: With the aid of a scheme, the authors explain the most important ways of processing nitroolefins for the synthesis of various products. The synthesis mentioned in the title should be carried out on the basis of nitromethane (see Scheme). 1-Nitropropanol was synthesized by condensation of nitromethane with acetic aldehyde (yield 39-50%). The yield varied according to the rate of addition of acetic aldehyde to the reaction mixture. 1-Nitropropylene was produced in 2 ways (Refs. 2,3): 1) By pyrolysis of 1-nitropropylbenzoate (obtained from 1-nitropropanol and benzoyl chloride, yield 80%); 2) by dehydration of 1-nitropropanol in the presence of phthalic anhydride (Table 1). In the first case, the yield was 28%, in the second case 67% of the theoretical yield. Polymerization of 1-nitropropylene in the presence of BF_3 was not possible. In a solution

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Synthesis of 1-Nitropropylene and Test of Its
Capability of Polymerizing

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S/020/60/131/06/36/071
B011/B005

of sodium bicarbonate, a polymer was formed as a yellow powder with the melting point at $+115^{\circ}$. In the presence of sodium methylate, 1-nitropropylene polymerizes more intensively. Temperature is the most important factor. The lower it is, the more intensively polymerization proceeds, and the higher is the yield (Table 2). The polymer is a solid, easily inflammable substance, partially soluble in dimethyl formamide, and insoluble in other solvents. There are 2 tables and 2 references.

SUBMITTED: October 8, 1959

Card 2/2

25784

S/020/61/139/002/014/017
B'03/B220

Polymerization capacity and synthesis ...

presence of anion exchange resin with a yield of 38-46% (see diagram). The constants of the product obtained differ but slightly from published data. Three types of catalysts were selected to study the polymerization of α -furyl nitro-ethylene, which initiate the polymerization process according to the anion, cation, and free-radical mechanism, respectively. The possibility of polymerization of α -furyl nitro-ethylene was studied in the presence of boron fluoride etherate, ammonium persulfate, and sodium methylate. With the use of boron fluoride etherate no polymer was formed. The emulsion polymerization of α -furyl nitro-ethylene in the presence of ammonium persulfate resulted in the formation of the polymer with a yield of 6.8%. It was an amorphous brown powder. Catalysts of the cation and free-radical type are, thus, practically unable to initiate the polymerization of α -furyl nitro-ethylene. An extensive polymerization of α -furyl nitro-ethylene is obtained in the presence of sodium methylate. Moreover, the dependence of the yield on temperature, catalyst quantity, and time reaction was studied (Fig. 1). The reaction was studied in the temperature range of 20-60°C, the proportion of catalyst amounted to 5-7%, the time was 30 min. to 12 hr. The highest yield in polymer (74.5%) was obtained at -10°C, a reaction time of 6-7 hr

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L 12656-63 EWP(j)/EPF(c)/EWT(m)/BDS ASD Pr-L/Pe-L RM/WW/MAY
ACCESSION NR: AP3003556 S/0020/63/151/002/0350/0352 68
65

AUTHORS: Topchiyev, A.V. (Deceased, Academician); Alaniya, V.P.;
Vagin, M.F.

TITLE: Problems in the polymerization of nitroolefins 7

SOURCE: AN SSSR. Doklady, v. 151, no. 2, 1963, 350-352

TOPIC TAGS: polymerization, nitroolefin, olefin, nitroisobutylene, dehydration, nitroisobutanol, catalyst, anion exchange resin, infrared spectroscopy, cyclohexylydenenitromethane, 1-(nitromethyl) cyclohexanol, 1-cyclohexynylene nitromethane, cyclohexylydenenitromethane, synthesis

ABSTRACT: In a study involving the polymerization of nitroolefins, nitroisobutylene and cyclohexylydenenitromethane were synthesized and their tendency toward polymerization was investigated. Nitroisobutylene was prepared in 65% yield by dehydration of nitroisobutanol in the presence of phthalic anhydride. Nitroisobutanol was prepared in 53.3% yield by condensation of acetone with nitromethane in the presence of sodium methoxide at 200 for 30 hours with stirring.

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L 12656-63

ACCESSION NR: AP3003556

2

Tendency of nitroisobutylene toward polymerization was studied by varying a) the type of catalysts (benzoyl chloride, benzoyl peroxide, ammonium persulfate, sodium methoxide, boron trifluoride, and phosphoric acid saturated with boron trifluoride), b) the amount of catalyst, c) the temperature (oil bath, water bath, ice-salt mixture) and d) the reaction time. A three-neck flask equipped with a mechanical stirrer and a reflux condenser was used. The polymer was purified by dissolving in benzene, followed by precipitation with methanol, filtering and drying under vacuum. Only benzoyl chloride and benzoyl peroxide proved to be useful catalysts in polymerization of nitroisobutylene. With benzoyl chloride as the catalyst, maximum yield (80%) was obtained after 14 hours by using 10% of the catalyst. The optimum temperature was 150C. With benzoyl peroxide as the catalyst, the yield was 20-21% and the optimum temperature range 120-140C. The amount of catalyst was varied from 1 to 10% with no significant influence on the yield. Polynitroisobutylene is a dark powder, insoluble in water, ethanol and ether but soluble in benzene and acetone. It melts at 98C; has a molecular weight (Rast method) of 1700; and exhibits paramagnetic properties. Cyclohexyldene-nitromethane (33-36% yield) was prepared by dehydration of 1-(nitro-

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L-12656-63

ACCESSION NR: AP3003556

methyl)cyclohexanol in the presence of phthalic anhydride. A mixture of two isomers: 1-cyclohexynylenenitromethane (b.p. 98-102°/12mm) and cyclohexylydenenitromethane (b.p. 108-110°/12 mm) was obtained. 1-(Nitromethyl)cyclohexanol was prepared in 41-45% yield by condensation of cyclohexanone with nitromethane in the presence of sodium methoxide. With condensation in the presence of anion exchange resins AE-17 and Amberlite IRA-401, the yield was much purer. Cyclohexylydene nitromethane was polymerized in the presence of sodium methoxide at 200 with a 57% yield. The polymer is a yellow amorphous powder, soluble in water and lower organic acids but insoluble in organic solvents. It has a molecular weight of 900. Its possible structure was confirmed by infrared spectroscopy. Orig. art. has: 2 figures, 5 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 24Nov62

DATE ACQ: 30Jul63

ENCL: 00

SUB CODE: CH

NO REF SOV: 002

OTHER: 003

Card 3/3

TOPCHIEV, A.V., akademik [deceased]; ALANIYA, V.P.; VAGIN, M.F.

Synthesis of o-fluoro-~~4~~-nitrostyrene and a study of its polymerization capacity. Dokl. AN SSSR 151 no.1:114-116 J1 '63. (MIRA 16:9)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im. Gubkina.

(Styrene) (Polymerization)

RAZUVAYEV, G.A.; STEPONIK, L.P.; PERVEYEV, F. Ya.; DEMIDOVA, V.M.;
ALANIYA, V.P.; SOKOLOV, N.A.; KHARCHENKO, V.G.; KRUPINA, T.I.;
KLIMENKO, S.K.; RASSUDOVA, A.A.; GORELIK, M.V.

Letters to the editors. Zhur. org. khim. 1 no. 12:2244-2246
D '65 (MIRA 19:1)

1. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete (for Razuvayev, Stepovik).
2. Leningradskiy gosudarstvennyy universitet (for Perveyev, Demidova).
3. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti imeni Gubkina (for Alaniya, Sokolov).
4. Saratovskiy politekhnicheskiy institut (for Kharchenko, Krupina, Klimenko, Rassudova).

LOBASHOV, K.A.; ALANOVA, T.G.; SOKOLOV, V.P.; KAZAMATKIN, Ye.P.;
LITVINOV, N.R.; MEYMAN, S.B.; GORBYLEVA, N.V.

New methods for the deactivation of waste slurries from organic
synthesis industries. Zhur. VKHO 6 no.2:173-180 '61.
(MIRA 14:3)
(Sewage disposal) (Chemistry, Organic—Synthesis)

ALANT OSZKAR, Dr.

Simple apparatus for continuous bladder drainage. Orv. hetil. 98 no. 36:
993-999 8 Sept 57.

1. Az Országos Idegsebészeti Tudományos Intézet (igazgató: Zoltan
László dr.) közleménye.
(CATHETERIZATION, appar & instruments
bladder drainage appar. for continuous use (Hun))

HORN, Zoltan, Dr.; LAZARITS, Jeno, Dr.; AIANT, Oszkar, Dr.

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az orvostudományok kandidátusa) közleménye.

(THROMBOSIS, compl.

postthrombotic synd., prev. & ther. by N, N-diethyleucineon-p-
aminobenzoic acid methanesulfonate - hydergine prep. (Hun))

(AMINOBIENZOATES, ther. use

N,N-diethyleucineon-p-aminobenzoic acid methanesulfonate -
hydergine prep. in prev. & ther. of postthrombotic synd.

(ERGOT ALKALOIDS, ther. use

hydergine - N,N-diethyleucineon-p-aminobenzoic acid methane-
sulfonate prep. in prev. & ther. of postthrombotic synd.

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1. Karolyi Sandor Korhaz, Sebeszeti Osztaly.

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(CHLORPROMAZINE, inj. eff.

diabetes mellitus, case reports (Hun))

(DIABETES MELLITUS, etiol. & pathogen.

chlorpromazine, case reports (Hun))

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(MIRA 14:9)

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0 '57. (MIRA 11:2)

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(CEREBELLUM, dis.

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(EMOTIONS

jealousy, simple, psychopathol. & delusional forms,
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Warszawie, kierownik Zakladu: prof. A. Jus i z Pracowni Histopatologicznej
Instytutu psychoneurologicznego; dyrektor Instytutu: prof. Z. W.
Kuligowski).

(TRANQUILIZING AGENTS, ther.) (DEPRESSION, ther.)